

What is claimed is:

1. A method for assessing toxicity and toxicology of a substance, comprising:
  - exposing a set of at least two genes to the substance;
  - 5 monitoring the response of each gene in the set of genes to the substance;
  - analyzing the variance of the response to the substance for each gene using contrast analysis;
  - constructing a summary score for each gene in the set of genes;
  - 10 performing a logistic regression analysis upon the summary scores; and
  - using the results of the logistic regression analysis to provide a predictive model regarding the toxicity and toxicology of the substance.

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